

1080-01-68

Chris Rorres* (rorres@vet.upenn.edu). *Archimedes, Floating Cylinders, and the “Old Man of the Lake”*. Preliminary report.

In the second of his two seminal works on floating bodies, Archimedes investigated how paraboloids float. This work included the first formulation of the conditions for a floating body to be in equilibrium and the conditions for an equilibrium position to be stable rather than unstable. In a previous paper I extended Archimedes’ work on floating paraboloids and in this talk I will discuss analogous results for floating cylinders. One particular application that I’ll present is how a horizontally floating log can transition to a vertically floating log—a “deadhead” in logger terminology. An example of this is the *Old Man of the Lake*, a celebrated deadhead that has been floating in Oregon’s Crater Lake for more than a century. (Received January 06, 2012)